

The Syntax of Opacity in German: Evidence from Possessor Raising and Binding

Vera Lee-Schoenfeld
Northwestern University

Workshop on Binding Theory and Reflexivity
Universität Stuttgart, October 8, 2005

1. Introduction

- Main contribution: establish parallel between BINDING and POSSESSOR DATIVE CONSTRUCTION as diagnostics for transparency/opacity of phrase-types
- Larger context, central concern of syntactic theory (since Ross 1967):
 - How local is syntax?
 - What are the measures of syntactic locality?
 - principal result: movement and anaphoric relations governed by a unified concept of locality
- Empirical basis:
 - (i) Binding, i.e. conditions under which reflexives and pronominals may occur
 - (ii) The Possessor Dative Construction (PDC), with a dative nominal playing the dual role of possessor and affectee
 - (iii) Reduced infinitive constructions, i.e. Bech's (1955/57) classic work on COHERENCE vs. NON-COHERENCE of infinitival complementation in German
- Intersection of these apparently disparate strands of analysis:
 - infinitival complements come in various "sizes" (degrees of internal complexity)
 - binding and PDC are sensitive to complexity of material intervening between two points of interaction involved in respective operation (binder ... bindee; PD ... possessor position in possessed nominal)
 - due to their local nature, binding and PDC serve as probes for complexity of infinitival complementation
- Going "Beyond Coherence":
 - traditional binary distinction between coherent (transparent, "nicht-satzwertige") and non-coherent (opaque, "satzwertige") infinitival complements is insufficient to account for full range of facts
 - Wurmbrand 2001: more fine-grained distinction between types of infinitival complementation
 - appealing to binding and PDC provides new evidence for Wurmbrand's typology of infinitival clause size and fine-tunes it w.r.t. ACCUSATIVUS CUM INFINITIVO (AcI)-constructions

- more generally: what makes a given phrase-type (not necessarily clausal) transparent or opaque for grammatical interactions with elements beyond its boundaries?
- The PHASE (Chomsky 2000, 2001):
 - subpart of sentence derivation, which, once completed, is closed off to grammatical interactions with elements introduced later in derivation
 - intuition behind notion ‘phase’: opacity-inducing property, i.e. “Satzwertigkeit” of certain phrase-types
 - question: how does ‘phase’ compare to ‘intervening subject’ (Chomsky’s (1973) SPECIFIED SUBJECT CONDITION (SSC)) as concept which potentially unifies opacity phenomena?
 - answer: ‘phase’ seems to cover more ground
 - proposal: ‘phase’ as single, unifying determinant of locality
- Overview of remainder of talk:
 2. Background on coherence, i.e. study of reduced infinitive constructions
 3. PDC as diagnostic for complexity of complements to control verbs
 4. Binding as diagnostic for complexity of AcI-complements
 5. More on binding: a phase-based approach to non-complementarity
 6. Tentative definition of ‘phase’ which captures the various instances of opacity investigated here

2. Coherence and Restructuring

- Goals:
 - introduction to German reduced infinitive constructions
 - explain why “reduced”
 - compare traditional binary coherence/non-coherence distinction with Wurmbrand’s (2001) restructuring typology
- English: clear difference in transparency between constructions involving finite and nonfinite complementation
 - (1) a. Mary saw [them leaving town].
b. **They** were seen [__ leaving town].
 - (2) a. Mary saw [that they were leaving town].
b. ***They** were seen [that __ were leaving town].
 - (3) a. They_i saw [each other_i negotiating].
b. *They_i saw [that each other_i were negotiating].
 - **case marking** spans embedded clause boundary in (1a) (nonfinite complement), not in finite (2a) (finite complement)

- **movement** into matrix subject position possible in (1b) (nonfinite complement), not in (2b) (finite complement)
 - **binding** possible across embedded clause boundary in (3a) (nonfinite complement), not in (3b) (finite complement)
- => nonfinite complements are transparent; finite complements are opaque
- German: difference in transparency of complements goes beyond finite-nonfinite distinction; transparency contrasts even *within* class of constructions involving nonfinite complementation
- (4) a. Er ließ [den Hund laufen].
 he let the dog (ACC) run
 ‘He let the dog run.’
- b. **Der Hund** wurde [__ laufen] gelassen.
 the dog (NOM) was (PASS) run let
 ‘The dog was allowed to run.’
- (5) a. Er hat versucht [den Hund einzufangen].
 he has tried the dog (ACC) in-to-catch
 ‘He tried to catch the dog.’
- b. **Der Hund** wurde versucht [__ einzufangen].
 the dog (NOM) was (PASS) tried in-to-catch
 ‘They (impersonal) tried to catch the dog.’
- (6) a. Er hat behauptet [den Hund zu vermissen].
 he has claimed the dog (ACC) to miss
 ‘He claimed to miss the dog.’
- b. ***Der Hund** wurde behauptet [__ zu vermissen].
 the dog (NOM) was (PASS) claimed to miss
 ‘They (impersonal) claimed to miss the dog.’
- (4): AcI-construction; German equivalent of English perception verb construction in (1)
 - (5)-(6): both matrix verbs (control verbs) take non-finite complement, but only *versuchen* ‘try’ in (5) allows LONG PASSIVE movement of embedded direct object into matrix subject position
- Bech (1955/57): Coherent vs. non-coherent infinitive constructions
 - *lassen* ‘let, allow, have’ and *versuchen* ‘try’ construct coherently; while *behaupten* ‘claim’ constructs non-coherently
 - later work building on Bech: coherent complements are “reduced” in the sense that transparency is due to transformation of complement from more complex to less complex structure (see e.g. Evers 1975, von Stechow & Sternefeld 1988, and Grewendorf & Sabel 1994)

- A cross-linguistic phenomenon:
 - transparent vs. opaque infinitival complementation also occurs in e.g. Spanish, Italian, and Japanese (see Aissen & Perlmutter 1976, Rizzi 1978, and Miyagawa 1987)
 - CLAUSE UNION / RESTRUCTURING
 - certain “trigger” verbs optionally cause matrix and embedded domains to merge into single clause
 - Wurmbrand (2001):
 - proposes more fine-grained “restructuring” typology, going beyond traditional binary coherence/non-coherence distinction
 - points to SCRAMBLING and LONG PASSIVE data in (7)-(8)
 - both *planen* ‘plan’ and *versuchen* ‘try’ pass classic coherence tests, but only *versuchen* seems to allow scrambling (7) and long passive movement (8) of embedded direct object into matrix clause
- (7) a. %... dass **den Traktor** geplant hat [__ zu reparieren].
 that Hans the tractor (ACC) planned has to repair
 ‘... that Hans planned to repair the tractor.’
- b. ... weil **den Traktor** versucht hat [__ zu reparieren].
 because Hans the tractor (ACC) tried has to repair
 ‘... because Hans tried to repair the tractor.’ (Wurmbrand 2001: 270)
- (8) a. *... dass **der Traktor** [__ zu reparieren] geplant wurde.
 that the tractor (NOM) to repair planned was (PASS)
 ‘... that they planned to repair the tractor.’
- b. ... dass **der Traktor** [__ zu reparieren] versucht wurde.
 that the tractor to repair tried was (PASS)
 ‘... that they tried to repair the tractor.’ (Wurmbrand 2001: 267-268)
- unlike *behaupten* ‘claim’, which does not pass classic coherence test, *planen* ‘plan’ does allow pronoun fronting
- (9) a. *... weil **ihn** der Hans [__ repariert zu haben] behauptete.
 because it (MASC) the Hans repair to have claimed
 ‘...because Hans claimed to have repaired it.’
- b. ... weil **ihn** der Hans [__ zu reparieren] plante.
 because it (MASC) the Hans to repair planned
 ‘...because Hans planned to repair it.’ (Wurmbrand 2001: 267-268)
- Wurmbrand concludes: verbs like *planen* can be grouped with neither the class of coherence-inducing nor the class of non-coherence-inducing predicates

- assumption: scrambling and long passive are case-driven movements; embedded direct object may only move into matrix clause if infinitival complement lacks case-licensor (transitive/agentive vP projection)
- proposal: three-way phrase-structural difference between complements of control verbs (see (10))

(10) Part of Wurmbrand’s (2001) Restructuring Typology

Type	Properties, Distribution	Examples
LEXICAL RESTRUCTURING (LR) Infinitival complement = VP	<ul style="list-style-type: none"> • no embedded (PRO) subject • no embedded structural case • possible with: control verbs 	<i>vergessen</i> ‘forget’ <i>versuchen</i> ‘try’ <i>wagen</i> ‘dare’
REDUCED NON-RESTRUCTURING (RNR) Infinitival complement = vP/TP	<ul style="list-style-type: none"> • embedded (PRO) subject • embedded structural case • possible with: control verbs 	<i>beschließen</i> ‘decide’ <i>planen</i> ‘plan’ <i>versprechen</i> ‘promise’
(FULL) NON-RESTRUCTURING (NR) Infinitival complement: CP	<ul style="list-style-type: none"> • embedded (PRO) subject • embedded structural case • possible with: control verbs 	<i>bedauern</i> ‘regret’, <i>behaupten</i> ‘claim’ <i>versuchen</i> ‘try’

- note: no actual “restructuring”; LR predicates like *versuchen* come with selectional requirement of either full CP or bare VP-complement; RNR predicates like *planen* select vP/TP-complement; NR predicates like *behaupten* select CP-complement
- note also: in Chomsky’s (2000, 2001) system, there are no “bare” VPs; every lexical V projects at least a defective “verbalizer” vP
- ungrammaticality of scrambling and long passive in context of *planen* (see (7a) and (8a)) is taken to indicate that complement includes agentive vP (agentive *v*: introducer of external argument and licensor of accusative case (see e.g. Hale & Keyser 1993, Chomsky 1995, and Kratzer 1996))
- Subtlety of judgments:
 - enough evidence for three-way distinction between complements? (Reis & Sternefeld 2004)
 - scrambling and long passive are not the most reliable diagnostics for presence of agentive vP
 - need for a new diagnostic

3. Possessor Raising as Coherence Diagnostic

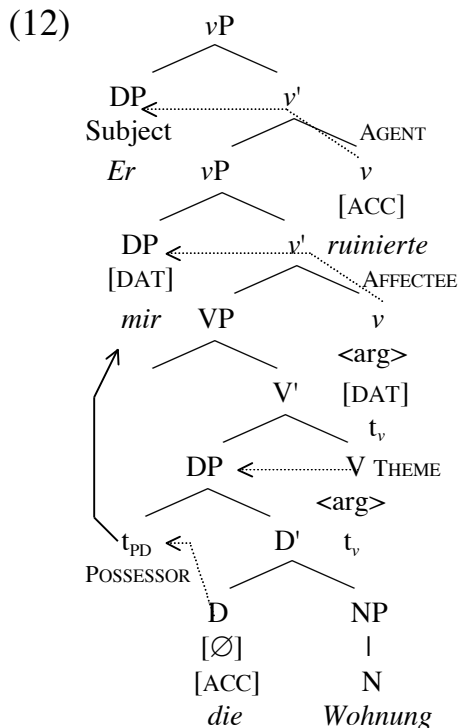
- Brief overview of POSSESSOR DATIVE CONSTRUCTION (PDC) and POSSESSOR RAISING:
 - instance of widely attested phenomenon known as EXTERNAL POSSESSION (see e.g. Payne & Barshi 1999, Vergnaud & Zubizarreta 1992)

(11) a. J'ai coupé les cheveux à Pierre.
 I have cut the hair to Pierre (DAT)
 'I cut Pierre's hair.' (Guéron 1985: 59)

b. ha-yalda kilkela le-Dan et ha-radio.
 the-girl spoiled to-Dan (DAT) ACC the-radio
 'The girl broke Dan's radio.' (Landau 1999: 3)

c. Tim hat der Nachbarin das Auto gewaschen.
 Tim has the neighbor (DAT, FEM) the car washed
 'Tim washed the neighbor's car.'

- dative-marked nominal acts simultaneously as possessor, i.e. subpart of larger nominal phrase, and complement to verb
- (11c): neighbor is interpreted as both possessor of car and affectee (here beneficiary) of car-washing event
- challenge: accounting for dual functioning of Possessor Dative (PD)
- PDC as possessor raising:
 - like Hebrew PDC (Landau 1999), German PDC is best analyzed as movement of PD from specifier of possessed nominal (where possessor role is assigned) into verbal argument slot (where affectee role is assigned) (see also Allen et al. 1990)



- PD-movement is strictly case-driven, not driven by thematic needs; no risk of overgenerating double-θ-role scenarios
- PDC as resulting from coming together of two elements:

- (i) a defective D: has possessor role to assign but cannot case-license argument in its spec
 - (ii) an affectee light verb (*v*)-head: assigns affectee role to argument in its spec and has means to case-license it (checks inherent dative case)
- Crucial for PDC as coherence diagnostic:
 - PD and associated possessor position are related via movement, not binding or control (see e.g. Guéron 1985, Vergnaud & Zubizarreta 1992, Hole 2005)
 - movement is case-driven, i.e. A-movement, and subject to locality-restrictions typical of A-movement: cannot cross clause-boundaries
 => sensitive to presence of subject-introducing and accusative-case-licensing agentive *v*P
 - Predictions about the PDC in the context of infinitive constructions:
 - if infinitive projects agentive *v*P, PD-movement across boundary of infinitival complement to higher A-position in matrix clause should be impossible
 - if infinitive does not project agentive *v*P, “long” PD-movement should be possible
 - Applying the PDC-test to constructions with embedded clausal complements of various complexity:
 - finite (CP-)complement with overt complementizer:
- (13) a. Tim hat bedauert [_{CP} dass er **der Nachbarin das Auto** waschen musste].
 Tim has regretted that he the neighbor (DAT) the car wash must (PAST)
 ‘Tim regretted that he had to wash the neighbor’s car.’
- b. *Tim hat **der Nachbarin** bedauert [_{CP} dass er **das Auto** waschen musste].
- nonfinite complements of control verbs:
- (14) a. Tim hat behauptet [_{INF} **der Nachbarin** schon **den Hof** gefegt zu haben].
 Tim has claimed the neighbor (DAT) already the yard swept to have
 ‘Tim claimed to have already swept the neighbor’s yard.’
- b. *Tim hat **der Nachbarin** behauptet [_{INF} schon **den Hof** gefegt zu haben].
- (15) a. Die Nachbarin hatte geplant [_{INF} **Tim** dafür **das Fahrrad** reparieren zu lassen].
 the neighbor had planned Tim (DAT) there-for the bike repair to let/have
 ‘The neighbor had planned to get Tim’s bike repaired in return.’
- b. *Die Nachbarin hatte **Tim** geplant [_{INF} dafür **das Fahrrad** reparieren zu lassen].
- (16) a. Tim hätte lieber versucht [_{INF} **seiner Schwester das Radio** heile zu machen].
 Tim would have rather tried his sister (DAT) the radio intact to make
 ‘Tim would have rather tried to fix his sister’s radio.’
- b. Tim hätte lieber **seiner Schwester** versucht [_{INF} **das Radio** heile zu machen].

- as predicted by Wurmbrand’s typology, complements of *behaupten* and *planen* do not, but complement of *versuchen* does allow long PD-movement
 - *behaupten* takes CP, *planen* takes vP/TP, and *versuchen* optionally takes VP-complement
 - long PD-movement only possible in restructuring context
 - data in (17)-(18) further corroborate Wurmbrand’s distinction between RNR predicates (taking vP/TP-complement) and LR predicates (optionally taking VP-complement)
- (17) a. Der Frisör hat (***der Kundin**) einfach beschlossen [(**der Kundin**) **die Haare** rot zu färben].
the hair-dresser has (the client (DAT)) simply decided (the client (DAT)) the hair red to dye
‘The hair-dresser simply decided to dye the client’s hair red.’
- b. Der Lehrer hat (***dem Schüler**) entschieden [(**dem Schüler**) **das Leben** zur Hölle zu machen].
the teacher has (the student (DAT)) chosen (the student (DAT)) the life to-the hell to make
‘The teacher chose to make the student’s life hell.’
- c. Herr Müller hat (***seinem Sohn**) erwogen [(**seinem Sohn**) **das Taschengeld** zu streichen].
Mr. Miller has (his son (DAT)) contemplated (his son (DAT)) the pocket-money to cross (out)
‘Mr. Miller contemplated taking away his son’s allowance.’
- (18) a. Der Mann hat (**seiner Frau**) tatsächlich vergessen [(**seiner Frau**) **den Rücken** zu massieren].
the husband has (his wife (DAT)) actually forgotten (his wife (DAT)) the back to massage
‘The husband actually forgot to massage his wife’s back.’
- b. Der Papa hat (**der Kleinen**) gerade erst begonnen [(**der Kleinen**) **die Haare** zu streicheln].
the dad has (the little one (DAT)) just now begun (the little one (DAT)) the hair to stroke
‘The dad has just now begun to stroke the little one’s hair.’
- c. Ich habe (**?der Professorin**) irgendwie versäumt [(**der Professorin**) **die Hand** zu geben].
I have (the professor (DAT)) somehow missed (the professor (DAT)) the hand to give
‘I somehow missed the opportunity to shake the professor’s hand.’
- Focus of following section: Fourth part of Wurmbrand’s restructuring typology, class of functional restructuring predicates, includes AcI-introducing verbs, which Wurmbrand leaves partially unanalyzed.

(19)

Type	Properties, Distribution	Examples
FUNCTIONAL RESTRUCTURING (FR) Infinitive = main predicate (vP or VP)	<ul style="list-style-type: none">• thematic properties are determined by infinitive• possible with: modal, raising, aspectual, causative, perception, motion verbs	<i>dürfen</i> 'may', <i>gehen</i> 'go', <i>hören</i> 'hear', <i>lassen</i> 'let' <i>scheinen</i> 'seem'

4. Binding as AcI Coherence Diagnostic

- According to Wurmbrand's (2001) restructuring typology, ACCUSATIVUS CUM INFINITIVO (AcI)-constructions (introduced by causative or perception verbs) should be analyzed roughly on a par with modal and raising verb, i.e. FR constructions:
 - infinitive defines lexical domain; finite (matrix) verb is part of functional domain of sentence
 - unlike in LR (control) contexts, there is only one lexical verb
 - since AcI-introducing verbs do assign θ -role to argument in their spec (see examples in (20)), Wurmbrand labels them 'Semi-Functional Restructuring' (SFR) predicates
 - but even 'SFR' is inadequate:

(20) a. Der kleine Junge ließ [_{AcI} den Stein fallen].
the little boy let the rock (ACC) fall (INF)
'The little boy let the rock fall.'

b. Die Eltern lassen [_{AcI} das Kind spielen].
the parents let the child (ACC) play (INF)
'The parents let the child play.'

c. Der Professor sieht [_{AcI} den Studenten den Artikel lesen].
the professor sees the student (ACC) the article (ACC) read (INF)
'The professor sees the student read the article.'

- (20b-c): two lexical domains with two referentially distinct subjects

- AcIs as hybrid category:
 - like complements of FR predicates, AcIs are syntactically integrated into domain of matrix verb
 - no extraposition (see (21))

(21) a. ...dass der Professor [_{AcI} den Studenten den Artikel lesen] sieht.

b. *...dass der Professor sieht [_{AcI} den Studenten den Artikel lesen].

- accusative case of AcI-subject: AcI depends on matrix verb for case
- no separate tense or negation domain

- like LR predicates, AcI-introducing predicates have θ -role to assign
 - like full clausal NR constructions, AcI-constructions like (20b-c) can host two referentially distinct subjects
- => transitive and unergative AcIs (see (20a-b)) are semantically “complete” and thus “satzwertig”

- Traditional system of coherence/non-coherence:
 - due to inability to extrapose, all AcIs are necessarily coherent
 - potential “Satzwertigkeit” of AcIs not captured
- Binding as diagnostic for AcI-complexity:
 - note: reflexive binding in German is a reliable indicator of complexity of intervening material because, unlike in English, there are no exempt anaphors (logophors) (Kiss 2001)
 - well-established fact: German reflexive *sich* ‘self’ cannot be bound across CP-boundary; pronominal must be used to refer to matrix subject in (22)

(22) Die Spieler_i hören [_{CP} dass die Fans_j sich_{*i/j}/sie_{i/*j} anfeuern].
 the players hear that the fans self/them on-cheer
 ‘The players hear that the fans are cheering them on.’

- also well-established: AcI-complements are smaller than CP and TP (see e.g. Haider 1993); can maximally consist of vP
- as motivated in sect. 5, binding domain is the minimal phase containing the anaphoric element; agentive *v* is a phase-defining category (Chomsky 2000, 2001, Fox 2000, Nissenbaum 2000); hence agentive vPs constitute binding domains (see section 5)

=> pronominal binding in (23) indicates possible degrees of AcI complexity:¹

- (23) a. Die Spieler_i hören [_{AcI} die Fans sie_i anfeuern].
 the players hear the fans them on-cheer
 ‘The players hear the fans cheer them on.’
- b. Die Großmutter_i lässt [_{AcI} die Krähe ihr_{γi} auf den Kopf fliegen].
 the grandmother lets the crow her on the head fly
 ‘The grandmother lets the crow fly onto her head.’
- c. Der kleine Junge_i lässt [_{AcI} den Stein ihm_{*i} auf den Kopf fallen].
 the little boy lets the rock him on the head fall
 ‘The little boy lets the rock fall on his head.’

¹ As explained in the following section, the reflexive, which is not shown in these examples, can, in principle, be bound by both matrix and embedded subject.

- (a) and (b): AcI-infinitives must project agentive vP
- (c): AcI must lack agentive vP
- proto-agent subjects (of transitive and unergative verbs) indicate presence of agentive vP
- proto-patient subjects (of passive and unaccusative verbs) indicate absence of agentive vP; merely bare VP plus defective verbalizer vP
- In sum, contra the traditional view, AcI-constructions are not necessarily coherent, and contra Wurmbrand, AcI-introducing verbs cannot all be analyzed as restructuring predicates.

5. Binding: A Phase-based Account of Non-complementarity

- Instances of non-complementarity (from fully to marginally acceptable)
 - AcI-constructions:
 - (24) a. Martin_i hört [_{vP} seinen Freund_j über sich_{i/j}/ihn_{i/*j} reden].
 Martin hears his friend about self/him talk
 ‘Martin hears his friend talk about him/himself.’
 - b. Die Großmutter_i lässt [_{vP} die Krähe_j sich_{i/(j)}/ihr_{?i/*j} auf den Kopf fliegen].
 the grandmother lets the crow self/her on the head fly
 ‘The grandmother lets the crow fly onto her head.’
 - c. Die Mutter_i lässt [_{vP} die Kleine_j sich_{?i/j}/ihr_{i/*j} die Schokolade in den Mund stecken].
 the mother lets the little one self/her the chocolate in the mouth
 stick
 ‘The mother lets the little girl stick the chocolate in her mouth.’
 - d. Die Spieler_i hören [_{vP} die Fans_j sich_{?i/j}/sie_{i/*j} anfeuern].
 the players hear the fans self/them on-cheer
 ‘The players hear the fans cheer themselves/them on.’
 - cf. clear-cut complementarity in (22), where complement is finite
 - complex DP:
 - (25) a. Martin_i hört nicht gern [_{DP} Thorstens_j Geschichten über sich_{i/j}/ihn_{i/*j}].
 Martin hears not with-pleasure Thorsten’s stories about self/him
 ‘Martin doesn’t like to hear Thorsten’s stories about himself/him.’
 - cf. plain DP (without possessor in Spec DP):
 - b. Martin_i hat [_{DP} Angst vor sich_i/ihm_{*i} (selbst)].
 Martin has fear of self/him (self – emphatic)
 ‘Martin is afraid of himself.’

- Binding possibilities:
 - reflexive cannot be bound across CP boundary but can be bound across agentive vP and complex DP boundary
 - domain in which reflexive can be bound is bigger than the domain in which pronominal must be free
- Binding conditions (to be revised):

(26) a. A reflexive must be bound within the minimal **TP** containing it.
 b. A pronominal must be free within the minimal **agentive vP or DP** containing it.
- Unifying agentive vP and DP:
 - both agentive (transitive/unergative) v and D have been argued to be (strong) phase-defining categories (Chomsky 2000, 2001, Fox 2000, Nissenbaum 2000, McCloskey 2000, Svenonius 2004)
 - => pronominal binding domain is the minimal phase containing the pronominal
- Unifying reflexive and pronominal binding domains:
 - instances of complementarity (e.g. in embedded CP-constructions (see (22)) are accounted for if binding domain for both pronominal and reflexive is their minimal phase
 - instances of non-complementarity, i.e. access of reflexive to higher phase, can be explained by reflexive movement to phase-edge
 - Safir 2004 (comparing *sich* to French reflexive clitic *se*): “covert clitic movement from prepositional object position is possible for German *sich* ... certain causative constructions permit the domain of covert clitic movement to pass a specified subject” (p. 19, ch. 5)
 - extension of Safir’s covert clitic movement to account for data in (24)-(25): reflexives, unlike pronominals, may covertly raise to their phase-edge to gain access to contents of higher phase
 - parallel between binding behavior of French clitics and A-movement (Kayne 1975): both clitics and A-moved phrases can engage in apparently unbounded grammatical interactions by means of establishing successive-cyclic local relations
 - Minimalist answer to successive-cyclicity: movement via phase-edges
 - => revised binding conditions:

(27) a. A reflexive must be bound within the minimal phase containing it.
 b. A pronominal must be free within the minimal phase containing it.

- Condition A & B: evaluation at LF upon completion of phase (see Baltin 2003)
 - uninterpretable (reflexive) feature on D of reflexive probed by matching feature and EPP on agentive v or D of complex DP ensures movement to phase-edge (“covert” movement: pronunciation of lower instead of higher copy of moved element)
 - Condition A (at completion of phase) checks whether reflexive has possible antecedent(s); reflexive at lower phase-edge is still accessible at point of completion of higher phase
 - Condition B (at completion of phase) checks whether pronominal is free; properly contained in lower phase, pronominal cannot be accessed by contents of higher phase
 - Reflexives and pronominals embedded in PPs
 - θ -independent PPs: another case of non-complementarity
- (28) a. Welches kleine Boot ließ er_i einfach [_{PP} neben sich_i/ihm_i] untergehen?
 which little boat let he simply next-to self/him under-go
 ‘Which little boat did he simply let sink next to him?’
- b. Er_i sah [_{PP} direkt vor sich_i/ihm_i] eine Schlange auf dem Boden.
 he saw directly in-front-of self/him a snake on the floor
 ‘He saw directly in front of him/himself a snake on the floor.’
- c. Er_i setzte den großen Teddybären [_{PP} neben sich_i/ihn_i].
 he sat the big teddy-bear next-to self/him
 ‘He sat the big teddy bear next to himself/him.’
- cf. θ -dependent PP:
 - d. Die Frau_i interessiert sich nur [_{PP} für sich_i/sie_{*i} (selbst)].
 the woman interests herself only for self/her (self – emphatic)
 ‘The woman is only interested in herself.’
 - facts are accounted for if θ -independent PPs are phases (Hestvik 1991, Baltin 1982)
- Possible explanation for marginal acceptability of “long distance” reflexive binding when reflexive is not embedded in PP-phase (see e.g. (24d) vs. (28b)):
 - adjunction of θ -independent PPs to phase-edge (outside of lexical VP; see also Grewendorf 1983) ensures that certain PP-embedded reflexives are accessible to higher phase without covert raising
 - only speakers who have incorporated possibility of covert raising into their grammar find non-PP “long distance” reflexive binding acceptable

6. The Phase as the Key to Opacity Effects

- Opacity of agentive v Ps:
 - opaque for possessor raising and binding (see above)
 - agentive v has been argued to be a PHASE-defining category
 - agentive v also introduces external argument, i.e. subject

=> opacity effect could be accounted for by appealing to phasehood or Chomsky's (1973) SPECIFIED SUBJECT CONDITION (SSC), i.e. the notion 'intervening subject'

 - SSC explains why agentive v Ps (projected by transitive/unergative verbs) but not defective verbalizer v Ps (projected by passive/unaccusative verbs) induce opacity
- Transparency of affectee v Ps:
 - like agentive v Ps, PD-licensing affectee v Ps host external argument
 - like defective v Ps, affectee v Ps are transparent for grammatical operations, e.g. accusative-case checking in passive/unaccusative AcI-constructions
 - behave like defective v Ps despite hosting external argument

=> cannot be accounted for by SSC
- Opacity of DPs, PPs, CPs:
 - pronominal binding shows that DPs and PPs can be phases
 - DPs must be complex (have possessor in spec) to be opaque
 - PPs are inherently subjectless; must be θ -independent (semantically "complete") to be opaque
 - CPs are inherently subjectless and always opacity-inducing

=> SSC can account for agentive vs. defective v Ps and DPs, but not for affectee v Ps, PPs, and CPs
- Proposed solution: The notion 'phase', if understood as defined in (24), is the single determinant of locality which unifies all three major strands of analysis brought together here:
 - (29) A phrase of type α , with α being v , D, P, or C, which is saturated and topmost is a phase.
 - (30) A phrase of type α is saturated if it has the maximum number of arguments that lexical items of type α can in principle take.
 - (31) A phrase of type α is topmost if it is not itself the complement of a phrase of type α .
 - given (25), (24) ensures that v and D-heads, which can take two arguments, are not phase-defining when they do not have a filled specifier

- (24) and (25) also ensure that C and P-heads, which take maximally one semantically selected argument, *are* phase-defining, even if lacking a filled specifier
 - given (26), (24) ensures that affectee vPs are not defined as phases; having a filled specifier is phase-defining only in connection with being the topmost potential phase-head in one's shell
- In conclusion, the proposed characterization of 'phase' accounts for the locality constraints (in the form of opacity effects) of the various phenomena of German syntax addressed here. Like coherence phenomena and the PDC, binding can be accounted for as phase-based. Since this phase-based understanding of locality builds on recent proposals as to which categories are potentially phase-defining and is based on fundamental notions like argument and hierarchical structure, it seems worth exploring to what extent it accounts for opacity phenomena cross-linguistically.

References

- Aissen, Judith & Perlmutter, David. 1976. Clause reduction in Spanish. In H. Thompson, K. Whistler, V. Edge, J. Jaeger, R. Javkin, M. Petruck, C. Smeall, & R. Van Valin (eds.) *Proceedings of BLS 2*, 1-30. (1983. *Studies in Relational Grammar 1*. Chicago: The University of Chicago Press, 360-403.)
- Allen, Barbara, Donald Frantz, Donna Gardiner & David Perlmutter. 1990. Verb agreement, possessor ascension, and multistratal representation in Southern Tiwa. In P. Postal & B. Joseph (eds.) *Studies in Relational Grammar 3*. The University of Chicago Press, 321-383.
- Baltin, Mark. 1982. A landing site theory of movement rules. *LI* 13 (1). 1-38.
- Baltin, Mark. 2003. The interaction of ellipsis and binding: Implications for the sequencing of Principle A.
- Bech, Gunnar. 1955/57. *Studien über das deutsche Verbum infinitivum*. Kopenhagen. 2nd edition 1983. Tübingen: Niemeyer.
- Chomsky, Noam. 1973. Conditions on transformations. In S. Anderson & P. Kiparsky (eds.) *A festschrift for Morris Halle*. New York: Holt, Rinehard and Winston.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels, & J. Uriagereka (eds.) *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. Cambridge, MA: MIT Press, 89-156.
- Chomsky, Noam. 2001. Derivation by phase. In M. Kenstowicz (ed.) *Ken Hale, A life in language*. Cambridge, MA: MIT Press, 1-51.
- Evers, Arnold. 1975. The transformational cycle in Dutch and German. Ph.D. dissertation, University of Utrecht, The Netherlands.
- Fox, Danny. 2000. *Economy and semantic interpretation*. Cambridge, MA: MIT Press.

- Grewendorf, Günther. 1983. Reflexivierung in deutschen A.c.I.-Konstruktionen – Kein transformationsgrammatisches Dilemma mehr. *GAGL* 23, 120-196.
- Grewendorf, Günther & Joachim Sabel. 1994. Long Scrambling and incorporation. *LI* 25, 263-308.
- Guéron, Jacqueline. 1985. Inalienable possession: PRO inclusion and lexical chains. In H.-G. Obenauer, J.-Y. Pollock & J. Guéron (eds.) *Grammatical representation*. Dordrecht: Foris, 43-86.
- Haider, Hubert. 1993. *Deutsche Syntax – Generativ*. Tübingen: Narr.
- Hale, Kenneth & Samuel Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In K. Hale & S. Keyser (eds.) *View from Building 20*, 53-109.
- Hestvik, Arild. 1991. Subjectless binding domains. *NLLT* 9, 455-496.
- Hole, Daniel. 2005. Extra argumentality – A binding account of “possessor raising” in German, English, and Mandarin. In J.-Y. Kim, B. H. Partee, & W. A. Lander (eds.) *Possessives and beyond: Semantics and syntax*. GLSA Publications, Amherst, MA.
- Kayne, Richard. 1975. *French syntax: The transformational cycle*: Cambridge, MA: MIT Press.
- Kiss, Tibor. 2001. Anaphora and Exemptness. A comparative treatment of anaphoric binding in German and English. In D. Flickinger & A. Kathol (eds.) *The Proceedings of the 7th International Conference on Head-Driven Phrase Structure Grammar*. CSLI Publications 2001, 182-197.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In J. Rooryck & L. Zaring (eds.) *Phrase structure and the lexicon*. Dordrecht: Kluwer, 109-137.
- Landau, Idan. 1999. Possessor raising and the structure of VP. *Lingua* 107, 1-37.
- McCloskey, James. 2000. Quantifier float and Wh-movement in an Irish English. *LI* 31, 57-84.
- McCloskey, James. 2002. Resumption, successive cyclicity, and the locality of operations. In S. Epstein & D. Seeley (eds.) *Derivation and explanation*. Blackwell Publishers, 184–226.
- Miyagawa, Shigeru. 1987. Restructuring in Japanese. In T. Imai and M. Saito (eds.) *Issues in Japanese linguistics*. Dordrecht: Foris, 273-300.
- Nissenbaum, Jon. 2000. Investigations of covert phrase movement. PhD dissertation. MIT, Cambridge, MA.
- Payne, Doris & Immanuel Barshi. 1999. External possession: what, where, how, and why. In D. Payne & I. Barshi (eds.) *External possession*. Amsterdam: Benjamins.
- Reis, Marga & Wolfgang Sternefeld. 2004. Review of Wurmbrand, Susanne: *Infinitives. Restructuring and clause structure*. *Linguistics* 42, 469-508.

- Rizzi, Luigi. 1978. A restructuring rule in Italian Syntax. In S. Keyser (ed.) *Recent transformational studies in European languages*. Cambridge, MA: MIT Press, 113-158.
- Ross, John. 1967. Constraints on variables in syntax. Ph.D. dissertation. MIT, Cambridge, MA.
- Safir, Ken. 2004. *The Syntax of anaphora*. Oxford University Press.
- Stechow, Arnim von & Wolfgang Sternefeld. 1988. *Bausteine syntaktischen Wissens: Ein Lehrbuch der modernen generativen Grammatik*. Opladen: Westdeutscher Verlag.
- Svenonius, Peter. 2004. On the edge. In D. Adger, C. de Cat, & G. Tsoulas (eds.) *Peripheries*. Dordrecht: Kluwer, 259-287.
- Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure*. Berlin & New York: Mouton de Gruyter.

Vera Lee-Schoenfeld
Department of Linguistics
Northwestern University
2016 Sheridan Road
Evanston, IL 60208-4090
v-lee-schoenfeld@northwestern.edu
<http://people.ucsc.edu/~vls/index.html>